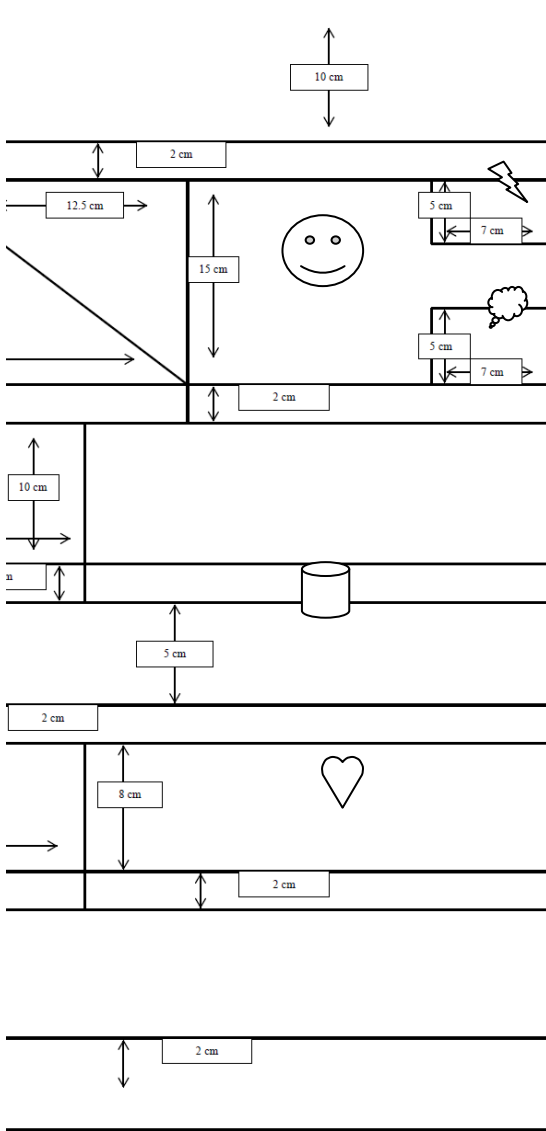


## Semester Map Inserts



### In the section marked with a smiley face,

1. Draw and label all the parts to the Plant system.
  - a. Roots
  - b. Xylem
  - c. Phloem
  - d. Leaves
  - e. Stem
2. Where does water enter into the plant? What structure carries the water? Which direction does water move? Describe the flow. What is the process called that pulls water up against gravity?
3. Where does CO<sub>2</sub> enter into the plant? Describe the flow of CO<sub>2</sub>.

### In the section marked with a lightening bolt,

1. Draw a leaf and label all the parts. Describe what the function is of each part.
  - a. Xylem
  - b. Phloem
  - c. Stomata
2. Through what process does CO<sub>2</sub> enter into the leaf.

### In the Section marked with a cloud,

1. Draw a root and label all the parts. Describe what the function is of each part.
  - a. Xylem
  - b. Phloem
  - c. Root hairs.
2. Through what process does H<sub>2</sub>O enter into the roots. Explain how this happens.

## Cell Membrane

### In the section marked with a cylinder,

1. Draw the cell membrane on your semester map.
  - a. Include and name all the structural components that make up the cell membrane
  - b. Identify which part of the cell membrane is considered to be hydrophobic and which part of the cell membrane is hydrophilic.
2. What are the three methods of transport that allow thing to travel in & out of the membrane? What is meant by the word selectively permeable?
3. What are the molecules that travel by each form of transport? Draw on your semester map how each of these molecules travel through the membrane. Make sure you draw the molecules going through in the right place on the cell membrane.

## Chloroplast

### In the section marked with a heart,

1. Draw a detailed picture of the chloroplast and label its parts.
2. Where are chloroplasts found?
3. What are the reactants that are needed by the chloroplast?
4. Once all the reactants are present, what process can take place? Explain the process. Write the formula?
5. What are the products that are produced from this reaction?
6. Where does each of the products go after they are produced?
7. In the space below the picture describe what is happening in the picture. In a factory, what would a chloroplast be? Why? How does the chloroplast relate to the ecological cycles, internal systems, and the cell membrane?

